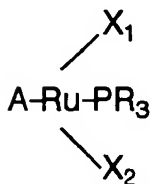


AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A polymer-supported arene-ruthenium complex characterized in that wherein the complex is represented by the following formula:



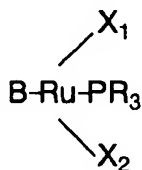
wherein A represents an organic polymer with a side chain comprising an aromatic ring coordinated to Ru, X₁ and X₂ represent the same or different halogen atoms, and R represents a hydrocarbon group that may have a substituent.

2. (Currently Amended) The polymer-supported arene-ruthenium complex of claim 1, wherein ~~characterized in that~~ the hydrocarbon group is an alicyclic hydrocarbon group or an aromatic hydrocarbon group.

3. (Currently Amended) The polymer-supported arene-ruthenium complex of claim 1 ~~or 2~~, wherein ~~characterized in that~~ the aromatic ring of the side chain is a benzene ring.

4. (Currently Amended) The polymer-supported arene-ruthenium complex ~~of any one of claims 1 to 3~~ of claim 1, wherein ~~characterized in that~~ the organic polymer is a polystyrene.

5. (Currently Amended) A method for producing the polymer-supported arene-ruthenium complex ~~of any one of claims 1 to 4~~, characterized by of claim 1, comprising a ligand exchange of a complex monomer represented by the following formula:



wherein B represents an aromatic compound comprising an aromatic ring coordinated to Ru, and X₁, X₂ and R are as defined above, with an organic polymer A with a side chain comprising an aromatic ring.

6. (Currently Amended) A polymer-supported arene-ruthenium catalyst for an organic synthesis reaction, ~~characterized by comprising the polymer-supported arene-ruthenium complex of any one of claims 1 to 4~~claim 1 as an active component.

7. (Currently Amended) The polymer-supported arene-ruthenium catalyst of claim 6, ~~wherein characterized in that~~ the catalyst is prepared by mixing the complex with a phosphine compound.

8. (Currently Amended) The polymer-supported arene-ruthenium catalyst of claim 7, ~~wherein characterized in that~~ the catalyst is prepared by being mixed with MPF₆, in which M represents a monovalent cation.

9. (Currently Amended) The polymer-supported arene-ruthenium catalyst of claim 8, ~~wherein characterized in that~~ the catalyst is prepared by being mixed with an alkynyl alcohol compound.

10. (Currently Amended) A method of an organic synthesis reaction, ~~wherein characterized in that~~ a ring-closing metathesis reaction of an olefin compound is carried out in the presence of the catalyst of ~~any one of claims 6 to 9~~claim 6.

11. (Currently Amended) A method of an organic synthesis reaction, ~~wherein characterized in that~~ reduction of a carbonyl group is carried out in the presence of the catalyst of claim 6 ~~or 7~~, to synthesize an alcohol compound.

12. (Currently Amended) A method of an organic synthesis reaction, ~~wherein characterized in that~~ a reaction comprising carbon-carbon addition of an acetylene group is carried out in the presence of the catalyst of ~~any one of claims 6 to 8~~claim 6.